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TWO NEW SPECIES OF LACHNINI (APHIDIDAE) FROM ARIZONA

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Herewith we describe two new species of Aphididae from Arizona.

Schizolachnus tusoca new species

Alate viviparous female.

Size and general color.—Length from vertex to tip of anal plate 2.35mm. Data on color not available. Head dusky brown with anterior margin considerably darker. Prothorax concolorus with head. Meso and metathorax dark brown. Abdomen in life perhaps pale green or very light dusky, with cornicles, small areas around the spiracles, cauda and anal plate light dusky. Antennal segment I and II slightly lighter in color than the head, segments III and IV pale dusky with distal portions darker, segment V and VI slightly darker than segments III and IV with distal portions darkest. Femora, with exception of extreme base dark brown. Pro and metathoracic tibiae dark dusky brown almost uniform in color throughout. Mesothoracic tibiae light dusky with distal portions darker. Tarsi dusky brown.

Head and thorax.—Head with median longitudinal suture present but indistinct. Comparative lengths of antennal segments as follows: III .443mm., IV .171mm., V .171mm., VI .114 + .028mm. Secondary sensoria confined to third antennal segment numbering four to five, arranged in a straight row, small, and hardly tuberculate. Segment III smooth except for apical portion, remaining segments lightly imbricated. Antennal hair sparce for genus, somewhat inclined. Majority of hair on III distinctly less than two times width of segment in length. Rostrum short, reaching less than half-way to mesothoracic coxae. Hair on anterior margin of head suggestive of that on dorsum not longer than that on antennae. Hair on prothorax shorter and somewhat thicker than that on remainder of thorax. Stigma light dusky with a pronounced scale-like surface. Media once branched. Surface of wing very rough, with the scale-like structures for the most part sharp pointed and when seen from the side suggestive of hair. Pro and mesothoracic femora provided with fine hair which is shorter than the width of the segment. The hair on the metathoracic femora is most unusual. That on the inner margin being very short and dull pointed, almost peg-like and equal to about one-third of the width of the segment in length. The hair on the outer margin of the femora is fine and about half the width of the segment in length.

Hind tibiae 2.28 mm. in length, provided with thick spine-like hair which is rather dull pointed. The hair on the inner margin is shorter than that on the outer margin. The hair at the apex of the tibiae is

longer than that which is more proximal. Metathoracic tarsi .40mm. long. The first tarsal segment is provided with a few hair, perhaps ten to twelve, these are all of one kind and all are directed to the same direction. Second taral segment provided with a few very long, fine, sharp pointed, drooping hair.

Abdomen.—Cornicles approximately .028mm. high. Base of Cornicles about 0.71mm. with only one hair a condition which is hardly typical of the genus. The rim of the cornicles shows considerable flare. Dorsum of abdomen with comparatively few coarse short hair and these for the most part arranged in transverse rows. The row being rather well defined towards the posterior, there being five distinct rows from the cauda forward and two less distinct rows forward of these. Ventral surface of abdomen with fine long irregularly arranged hair. The cauda and anal plate are characteristic of the genus as regards shape, both are provided with two kinds of hair, a very long slightly curved, coarse type on the margins and a decidedly shorter and much finer type on the dorsum.

Apterous viviparous female.

Size and general color.—Length from vertex to tip of anal plate 2.38mm. Width of head through the eyes. 457mm. Color approximately that of alate viviparous female with head, thorax and legs slightly darker.

Head and thorax.—Comparative lengths of antennal segments as follows: III .347mm., IV .128mm., V .143mm., VI .1 + .028mm. There are no secondary sensoria. In other respects the antennae are suggestive of the alate viviparous female. Rostrum exceedingly short, just failing to reach the coxae of the mesothoracic pair of legs. Occular tubercles present but not well developed. Hind tibiae 1.85mm. long. Hair on inner and outer margins of tibiae approximately the same in quality rather dull at the tip, and for the most part but little more than half the width of the tibiae in length. Hind femora as in alate viviparous female. Length of hind tarsi .347mm. with the hair similar to that found in alate viviparous female.

Abdomen.—Cornicles lower than those of alate viviparous female with the base not much larger than the width of the cornicle at the apex. Width of base of cornicle about .07mm. height of cornicle about .028mm. Outer rim of base of cornicle irregular and somewhat indistinct. Rim of base of cornicle associated more or less with from one to three hair. Rim of cornicles near apex poorly developed, and non flaring. Cauda and anal plate as in alate viviparous female. The cornicles of this form could perhaps be best described as almost ring-like. It is strange that they differ from those of the alate form.

Holotype alate viviparous female mounted one same slide with the apterous viviparous female which is made morphotype. This slide has been deposited in the United States National Museum. Data associated with this species: Host *Pinus arizonica.* This species of pine is considered by some to be a variety of *Pinus ponderosa.* Chiricahua Mountains, Arizona, 8,000 ft. elevation. June 23, 1933, by O. Bryant.

This species does not fit well the genus in which it is being placed, as that genus is now conceived. For example the cornicles of the apterous

viviparous female can hardly be referred to as shallow hairy cones, nor can those of the alate form be considered hairy. There are objections to placing the species in the genus *Eulachnus* as characterized by Baker. Dr. Börner has recently described as new, several species which he has placed in the genus *Eulachnus.* Some of the species described by Dr. Börner can hardly be considered as belonging to the genus *Eulachnus* in the sense that Baker thinks of it. For example at least one of the species has minute hair on the vartex and antennae and another has the cornicles on shallow but not hairy cones, all however have long hair on the dorsum of the first segment of the tarsus in common with the type of the genus *Eulachnus* which is *Lachnus agilis* Kalt. *Schizolachnus tusoca* differs from *Schizolachnus pini-radiatae* (Davidson) by the shorter hair on the antennae and legs, by the almost peg-like hair on the inner margin of the metathoracic femora, by the darker legs, and fewer hair associated with the cornicles. It agrees with pini-radiatae in the lack of long hair on the dorsum of the first segment of the tarsus. Baker in his Generic Classification of Aphididae places the genus *Schizolachnus* in the Subtribe Lachnina. This seems strange. It would appear more logical to place both the genus *Schizolachnus* and the genus *Unilachnus* in the Subtribe Eulachnina and emphasize the obtuse rostrum so characteristic of other Eulachnina. When so placed the genus *Eulachnus* differs from the genus *Schizolachnus* most conspicuously by the presence of hair on the dorsum of the first segment of the tarsus and the more feebly developed occular tuberclese; factors hardly sufficient to differentiate genera. The description of the genus *Eulachnus* was published in 1909 as was that of the genus *Schizolachnus,* despite the fact that both works in which the two genera were described bear the date 1908. The genus *Eulachnus* was described on p. 329, and the genus *Schizolachnus* on p. 375. The genus *Eulachnus* would therefore have page priority should it not be possible to determine the actual mailing date of the two publications were one to combine the two genera.

Cinara tonaluca, new species

Apterous viviparous female.

Size and general color.—Length from vertex to tip of anal plate varying from 2.14-2.57mm. with larger sizes predominating. Width of head through the eyes .57-.62mm. Data on color not available the specimens having been cleared and strained. General color of head thorax and abdomen apparently the same, ostensibly light. Antennae dusky. Segments four and five of rostrum dark brown, third segment more or less spotted. Femora quite uniformally dusky-brown. Tibiae apparently pale except for apical region which is concolorous with tarsi which are dusky brown. The spiracles appear to be surrounded by small brownish areas similar to the base of the cornicles. Cauda dusky brown as is a small area just anterior to it. Dorso lateral area of abdomen with a few small brown spots. These suggest wax glands.

Head and thorax. Relative length of antennal segments as follows: III .21-.27mm. with the longer lengths predominating, IV .10-.128mm., V .128-.171mm. always longer than IV, VI .057-.085 + .042-.057mm. Secondary sensoria one, confined to middle of segment V rather small and only slightly tuberculate. Antennal hair rather sparce, that on

anterior margin longest, being about half again as long as the segment is wide. Hair on third antennal segment very upright that on remaining segments slightly more inclined but still forming a large angle with side of segment. All segments smooth except unguis. Rostrum long, almost reaching base of cornicles. Hind tibiae .75-1.14mm. long, each measurement representing a single extreme case, as a rule more than 1.01mm. Hair on outer margin of tibiae slightly longer than width of tibiae very upstanding, inner hair on hind tibiae finer, somewhat shorter and more inclined. The hair near the apex of the tibiae more inclined than that above. Hind tarsi .185-.214mm. in length. First tarsal segment with 7-9 hair.

Abdomen.—Abdomen clothed with many rather long hair. Base of cornicles varying from .10-.114mm. provided with one kind of hair. Cauda rather shallow.

Alate viviparous female.

Size and general color.—The length from vertex to tip of anal plate varies from 2.28-2.43mm. Data on color not available but apparently similar to that of apterous viviparous female.

Head and thorax.—Antennal segments with the following comparative lengths: III .286-.30mm., IV .128mm., V .143-.157mm., VI .071 + .042 mm. Secondary sensoria limited to one or less on III and one on V. Both sensoria are small and only slightly tuberculate. Hair on antennae similar to that on apterous viviparous female. Rostrum as in apterous viviparous female. Hind tibiae 1.17-1.22mm. long. Hair on hind tibiae shorter than that in apterous viviparous female, being subequal to width of segment and slightly more inclined than that of the apterous form. Hind tarsi .21-.228mm. long. First tarsal segment with as many as ten hair. Media of fore wings twice branched, second branch of media closer to margin of wing than to the first branch. Media and branches very faint. Stigma rather dark, scale-like. No veins reach the margin of the wing.

Abdomen.—Base of cornicles about .128mm. wide. Height of cornicles about .071mm. Abdomen with numerous long sharp pointed hair. Surface of abdomen very finely imbricated. Cauda and anal plate as in the apterous viviparous female.

Holotype alate viviparous female. Morphotype apterous viviparous female. Holotype and morphotype mounted on the same slide, which has been deposited in the United States National Museum. There are several paratypic slides. Host *Juniperus monosperma.* The material was collected by L. P. Wehrle at Tucson, Arizona, July 13, 1943.

This species keys to the first FF couplet page 845 in Gillette and Palmers key, Annals Entomological Society of America vol. XXIV except that rostrum is shorter than the body. From *Cinara pulverulens* it differs in host, sensoria, and length of hair on the hind tibiae in alate. From *Cinara fornacula* it differs in host, size, and character of hair on hind tibiae. From *Cinara juniperensis* it differs in specific host, sensoria, media and in the size of the base of the cornicles, length of hair on the hind tibiae and their angle.